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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/815,206	03/31/2004	Angel Stoyanov	25384	9520

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EXAMINER

CORDRAY, DENNIS R

ART UNIT	PAPER NUMBER
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1731

DATE MAILED: 12/19/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

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Office Action Summary

Application No.

10/815,206

Applicant(s)

STOYANOV ET AL.

Examiner

Dennis Cordray

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 November 2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1-4, 6-10, and 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al (6340411) in view of Cook et al (5562740) and further in view of Neogi et al (US 2003/0208859).

Hansen et al discloses a crosslinked cellulosic product comprising cellulose fibers, α -hydroxy polycarboxylic acid species of citric or tartaric acid (col 4, lines 32-45 and 56) and a polyol species of sorbitol, (col 59, lines 29-30). The disclosure teaches that both α -hydroxy polycarboxylic acids and polyols can cause intrafiber crosslinking (col 34, lines 4-6, 20-28). The polyol can be present in an amount from 1% to 80 % by weight of the fibrous material (col 6, lines 8-10). Examples are given of the fibrous product with a wet bulk of 16.1 and 19.4 cc/g (col 41, lines 49-50). Hansen teaches that the crosslinked fibers could be used in absorbent products (col 2, lines 1-3).

Hansen et al does not disclose bleached fibers or that bleached fibers have a higher whiteness than unbleached fibers. Hansen et al also does not disclose fibers having a brightness greater than 80 % ISO.

Cook et al discloses individualized polycarboxylic acid crosslinked fibers with a brightness of 86 after bleaching in an aqueous solution of sodium hydroxide and

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hydrogen peroxide (col 3, lines 42-45, 51-52). Hansen et al teaches that improved brightness has a better aesthetic appeal to customers (col 3, lines 8-12).

Neogi et al teaches that bleaching indirectly elevates whiteness and that consumer preference is toward a brighter and whiter product (par 2 and 3).

The art of Hansen et al, Cook et al, Neogi et al and the claimed invention are analogous because they are from the same art of treating cellulosic fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to obtain the claimed brightness criterion in the process of Hansen et al in view of Cooks disclosed values to make the crosslinked fibers appealing to customers. It would also have been obvious at the time the invention was made to a person with ordinary skill in the art to bleach the fibers using the claimed bleaching agents in the process of Hansen et al in view of Cook et al and further in view of Neogi et al to make the fibers appealing to customers.

2. Claims 1-5 and 14-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al, Cook et al and Neogi et al as applied to claim 1 above and further in view of Smith et al (US 2002/0090511).

Hansen et al, Cook et al and Neogi et al do not disclose malic acid as a crosslinking agent. Hansen et al, Cook et al and Neogi et al also do not disclose particular the absorbent products that incorporate the fibers (i.e.-infant diaper, adult incontinence product, or feminine hygiene product).

Smith et al claims malic acid as a crosslinking agent (Claim 40) and, in addition gives examples of many other carboxylic acids that can be used as crosslinking agents

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(Tables 3 and 4). Smith et al also teaches that absorbent products include infant diapers, adult incontinence products, and feminine hygiene products (paragraph 3).

The art of Hansen et al, Cook et al, Neogi et al, Smith et al and the claimed invention are analogous because they are from the same art of treating cellulosic fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art to use malic acid as a crosslinking agent in the process of Hansen et al, Cook et al and Neogi et al and further in view of Smith et al as one of many well known carboxylic acids used for the purpose. It would also have been obvious at the time the invention was made to a person with ordinary skill in the art to use the crosslinked fibers in absorbent products including infant diapers, adult incontinence products, and feminine hygiene products for commercial sale.

3. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al, Cook et al and Neogi et al as applied to claim 1 above and further in view of Arifoglu et al (5103522).

Hansen et al, Cook et al and Neogi et al do not disclose a Whiteness Index (WI) of at least one unit higher in bleached fibers than in unbleached fibers.

Arifoglu et al gives an example of a wool flannel with a WI of 11.42 unbleached and a WI of 35.85 after bleaching with hydrogen peroxide.

The art of Hansen et al, Cook et al, Neogi et al, Arifoglu et al and the claimed invention are analogous because they are from the same art of treating fibers. It would have been obvious at the time the invention was made to a person with ordinary skill in the art in the process of Hansen et al, Cook et al and Neogi et al and further in view of

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Arifoglu et al to obtain the claimed increase in WI to improve the customer appeal of the product, as taught by Neogi.

4. Claims 15 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hansen et al, Cook et al and Neogi et al as applied to claim 1 above, and further in view of Ko et al (US 2003/0211248).

Hansen et al, Cook et al and Neogi et al do not disclose particular the absorbent products which incorporate the fibers.

Ko et al teaches that absorbent articles include diapers, adult incontinence products, feminine hygiene products, tissues and towels.

It would have been obvious at the time the invention was made to a person with ordinary skill in the art in the process of Hansen et al, Cook et al and Neogi et al as applied to claim 1 above and further in view of Ko et al to use the crosslinked fibers in absorbent products, including diapers, adult incontinence products, feminine hygiene products, tissues and towels for commercial sale.

Double Patenting

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

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Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8 and 12-13 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1, 5-8, 10-12 and 16-17 of copending Application No. 10/748930 in view of Neogi et al (US 2003/0208859) and further in view of Cook et al (5562740).

- Claim 1 of the instant application is obvious in view of Claim 1 of the copending application in view of Neogi et al (US 2003/0208859). Claim 1 of the copending application recites crosslinked cellulosic fibers comprising cellulosic fibers reacted with an effective amount of crosslinking agent in the presence of an effective amount of C₄-C₁₂ polyol and characterized by a Whiteness Index greater than about 69.0. Claim 1 of the copending application differs from Claim 1 in the instant application in that it 1) does not specify that the crosslinked fibers are bleached; 2) it does not specify that the bleached fibers have a Whiteness Index greater than unbleached fibers; and 3) it claims a brightness of greater than about 69.0. Claim 1 of the copending application does not exclude bleaching and so is generic to Claim 1 of the instant application. Specifically, one embodiment anticipated by the Claim 1 of the copending application would be the bleached crosslinked fibers of Claim 1 of the instant application. Neogi et al teaches that bleaching elevates both brightness and whiteness and also that consumer preference is toward a brighter and whiter product (par 2 and 3). It would have been obvious to one of ordinary skill in the art to bleach the

crosslinked fibers of Claim 1 of the copending application to make the fibers brighter and more appealing to consumers as per the teachings of Neogi et al. The composition of the reacted fibers is the same in both claims, thus their properties, such as brightness, would be the same.

- Claims 2-5 of the instant application read the same as Claims 5-8 of the copending application with appropriate change in the referenced claim numbers.
- Claims 6-8 the instant application read the same as Claims 10-12 of the copending application with appropriate change in the referenced claim numbers.
- Claims 12 and 13 of the instant application read on substantially the same ranges as Claims 16 and 17 of the copending application.

This is a provisional obviousness-type double patenting rejection.

Response to Arguments

Applicants' arguments filed 22 November, 2005 have been fully considered but they are not persuasive. The reasons are as follows:

Rejection of Claims Under 35 U.S.C. §103(a)

Applicants have argued that the Neogi reference cannot be used as prior art against the instant application pursuant to 35 U.S.C. §103(c)(1) because it is a §102(e) reference with respect to the present application and, like the present application, is assigned to Weyerhaeuser Company. However, the Neogi reference is a valid reference under 35 U.S.C. §102(a) and thus can still be used in a rejection under 35 U.S.C. §103(a).

Regarding the rejection of claims 1-4, 6-10 and 12-14, applicants have argued that the Hansen reference teaches away from using a polyol during the curing step because that would result in a loss of effectiveness of the binder. Hansen states that polyols and polycarboxylic acids will function as crosslinking material and that they can be used together to form covalent crosslinking bonds (col 34, lines 3-10). The polycarboxylic acids and polyols disclosed by Hanson et al, when added to the fibers, are capable of functioning as crosslinking agents because, where the claimed and prior art apparatus or product are identical or substantially identical in structure or composition, a *prima facie* case of either anticipation or obviousness has been established. *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). In other words, when the structure recited in the reference is substantially identical to that of the claims, the claimed properties or functions are presumed to be inherent. thus the instant invention is anticipated.

The Cook reference does not teach using polycarboxylic acids and polyols during the crosslinking reaction. However, Cook et al does disclose individualized polycarboxylic acid crosslinked fibers with a brightness of 86 after bleaching in an aqueous solution of sodium hydroxide and hydrogen peroxide (col 3, lines 42-45, 51-52).

Neogi et al teaches that bleaching indirectly elevates whiteness and that consumer preference is toward a brighter and whiter product (par 2 and 3), thus giving motivation to increase brightness and whiteness.

The combination of Hansen et al in view of Cook et al and further in view of Neogi et al renders the instant invention obvious.

Regarding rejection of claims 1-5 and 14-15, applicants have argued that Smith et al does not suggest or provide any motivation to use polyols in the crosslinking reaction nor to improve the Whiteness Index of the crosslinked fibers. Smith et al was used to disclose the use of malic acid as a suitable polycarboxylic acid crosslinking agent (Tables 3 and 4) and that absorbent products include infant diapers, adult incontinence products, and feminine hygiene products (paragraph 3). The combination of Hansen et al in view of Cook et al and further in view of Neogi et al and Smith et al renders the instant invention obvious.

Regarding rejection of claim 11, applicants have argued that Arifoglu et al teaches only bleaching of fibers and that there is no motivation to combine references. Arifoglu et al was used only to teach that bleaching fibers can result in an increase in the Whiteness Index of greater than one unit over the unbleached fibers. Hansen et al in view of Cook et al and further in view of Neogi et al teach that bleaching elevates whiteness and give motivation for bleaching fibers. It would be obvious to a person with ordinary skill in the art to obtain the claimed increase in WI in the process of Hansen et al, Cook et al and Neogi et al and further in view of Arifoglu et al.

Regarding rejection of claims 15-16, applicants have argued that there is no suggestion, teaching or motivation to combine the Cook reference with the teachings of Ko et al. The Ko reference was used in the rejection to teach that articles made using absorbent structures include diapers, adult incontinence products, feminine hygiene

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products, tissues and towels. Since the absorbent structures of Hansen et al (col 2, lines 1-3), Cook et al (Abstract), Neogi et al (p 1, par 8) can be used in absorbent products, it would be obvious to combine the teachings of Ko et al with any or all of the aforementioned references.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dennis Cordray whose telephone number is 571-272-8244. The examiner can normally be reached on M - F, 7:30 -4:00 PM.


If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on 571-272-1189. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



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